

**AMENDMENTS TO THE DRAWINGS:**

The attached drawing(s) include changes to FIGS. 1 and 2.

In the Office Action at item 5, the Examiner objected to the drawings and requested a new drawing. In order to overcome these objections, replacement figures are submitted herewith. New FIG. 2 simply shows what was previously described in the claims. No new matter has been added. Approval of these changes to the Drawings is respectfully requested.

## REMARKS

In accordance with the foregoing, claims 1, 2 and 5-9 have been amended. Claims 1-9 are pending and under consideration.

The claims have been amended to address the objections raised in items 3 and 4 of the Office Action.

With regard to item 5 of the Office Action, the invention is directed to a method, not a device. Because the claimed messages cannot be seen, Applicant questions the need for a drawing. However, to further prosecution, new FIG. 2 is being filed herewith. To adapt the application to FIG. 2, the original drawing has been labeled as FIG. 1, and the specification has been amended to refer to FIG. 2. If the Examiner does not change his position regarding the necessity for a drawing, it is respectfully requested that FIG. 2 be entered into the application and that the objection be withdrawn.

Claims 1, 2, 7 and 9 are rejected under 35 USC §102(b) as being anticipated by US Patent No. 6,122,512 to Bodin. Bodin refers to a method for determining the geographical location of a mobile station within a cellular mobile telecommunications system. Our invention deals with a method for carrying out a handover procedure in a radio communications system in such a way that overloading of the radio communications system due to frequency re-use, is avoided.

In a radio network, for example, a GSM network, the area covered is divided into cells, each cell being controlled by one base station. All base stations are connected to one or more base station controllers that manage the radio resources. In order to avoid interference with radio links in adjacent cells, each cell is assigned different physical channels with different frequencies. The same physical channels are reused only when two cells are over a certain distance from one another. When a mobile station moves from one cell to another, the radio communications system will detect this and initiate a handover procedure that must be executed, so that the mobile station can switch its connection from a base station in its original cell to one in the new cell.

When initiating the handover process, the radio communications system will on the one hand, transmit to the mobile station a message containing the command to carry out a handover procedure, information about the base station to which the connection is to be switched and a handover procedure identifier. On the other hand, the radio communications system will transmit the handover procedure identifier to the base station that will take part in the procedure,

in order for it to be aware that an imminent handover procedure will take place and it will be able to recognize a handover signaling message when it is received.

The mobile station then transmits a handover signaling message containing the handover procedure identifier to the base station. In GSM systems, the same physical channel (defined by a frequency band and a base station color code) may be used to transmit both the handover signaling message and channel request messages. In these channel request messages, mobile stations request a new radio link to be set up with the radio communications systems. Each channel request message contains an identification word with specific values regarding the connection to be made. However, in systems such as GSM systems, the format and content of both the handover procedure identifier and the identification word are the same. This leads to the problem that a base station that is not part of the handover procedure, but is using the same physical channel (base station BTS 13, for example), will receive the handover signaling message and interpret the handover signaling message as a channel request message. This in turn causes that base station to request a radio channel from the base station controller. The base station controller sets up a new radio channel. Within three seconds of setting up the new radio channel, if the radio communications system does not detect a radio link, the radio channel is released because no mobile station has actually requested the channel.

The three-second time period prevents the radio channel from being tied up for an extended period. However, the communications between the base station and the base station controller also present a problem. Specifically, the request, assign and release procedures overload the base station controller.

Bodin discloses a method for determining the geographical location of a mobile station within a cellular mobile telecommunications system. Bodin does not disclose or suggest sending a handover signaling message that contains a code word identifying a handover procedure, the code word having a value corresponding to a handover code which is reserved for handover procedures.

Referring again to the embodiments disclosed in the specification, the mobile station might move from cell Z03 to cell Z33, from the coverage area of base station BTS03 to the coverage area of base station BTS33. BTS33 is notified by the radio communications system that handover procedure is going to occur. The mobile station is authorized to perform a handover and is assigned to a traffic channel with a particular frequency, which traffic channel is to be used to communicate with BTS33. In the example described in the specification,

frequency F1 is used as the traffic channel between the mobile station and BTS33. Frequency F1 is the broadcast frequency assigned to BTS13.

The mobile station sends a handover signaling message to BTS33. Because frequency F1 is also assigned to BTS13, BTS13 also receives the message. In order to avoid BTS13 from interpreting the message as a channel request message, and thereby overloading the communications system, BTS13 determines whether the code word contained in the message matches a reserved code word corresponding to a handover code.

Unlike BTS33, BTS13 has not been notified by the radio communications system that a handover is to occur. When BTS13 checks the code word, BTS13 ascertains that the received message is a handover signaling message and not a channel request message. Accordingly, BTS13 does not request a new channel, and this prevents overloading the communications system. Because BTS33 has been notified that it is the target of the handover, BTS33 performs the normal handover procedure.

Bodin refers to a method for determining the geographical location of a mobile station within a cellular mobile telecommunications system. Bodin does not disclose the features of a message being transmitted containing a code word that indicates that handover procedure is being requested, over the same channel that is used for transmitting messages requesting a radio link, to be used to verify that the said transmitted message is a valid handover procedure. Nor does Bodin disclose the fact that this verification is performed at another base station "one of the further transmitting/receiving units" that is not taking part in the handover procedure. From column 5, lines 16 to column 7, line 22, Bodin describes the procedure applied in a GSM handover.

Using the reference characters from FIG. 1 of Bodin, one possible object of the invention is to ensure that when a mobile station (MS) transmits a message to base station BTS2 in cell C2, that same transmitted message, if received by base station BTS3 in cell C3 (because BTS3 is assigned to the same physical channel as the mobile station (MS)) will be usable to verify that the message relates to a handover procedure and not a channel allocation request, which channel allocation request could overload the system. This is not disclosed in or hinted by Bodin.

In the Office Action, the Examiner cites column 7, lines 1-4 of Bodin, which indicate that if the access signal received in the base station BTS2 contains correct control data, the base station BTS2 proceeds with the handover. This sentence indicates that if the access message is received at BTS2 without errors ("correct control data"), the handover proceeds.

BTS2 expects that the handover message will be sent to it. Lewis et al. does not describe what happens if the handover message is received with incorrect control data. If the handover message is received with errors, i.e., incorrect control data, BTS2 will probably send a re-transmission request back to the mobile station (MS) or perform a similar procedure. BTS2 will not assume that it received an access signal intended for another base station.

If the Examiner is of the opinion that incorrectly received control data implicitly indicates that the access channel was received at a wrong (further) transceiver unit, this is incorrect. There is no description in Bodin relating to a further transceiver unit receiving the handover access message. Bodin clearly states that column 7, lines 1-4 applies to a procedure done by BTS2. As described at column 6, lines 37-40, BTS2 is clearly the transceiver unit involved in the handover procedure.

The claims require more than the handover access message being received at a further transceiver unit. The claims require that the further transceiver unit check a code word to identify the message as a handover signaling message. The claims require that the further transceiver unit ignore the message once it is identified as a handover signaling message.

Attached is a sketched flow chart, which may be useful to the Examiner for comparing the present invention with Bodin. Now FIG. 2 of the present application refers to checking a code word. In the Bodin sketch, there is no code word, and therefore there is no check. The handover signaling message is read at BTS2. Even if there is incorrect control data, BTS2 will eventually proceed with the handover.

The sketch for Bodin shows that the handover signaling message is read at a further transceiver. This is not mentioned in Bodin. However, it appears that the Examiner believes it occurs. Even if the handover signaling message is read at the further transceiver, the action taken is to set up a new radio channel. There is no suggestion that the further transceiver checks a code word in the handover signaling message and then ignores the message based on the code word. It is prohibited hindsight to assume that Bodin teaches this feature.

In order for a reference to anticipate in a claim, the reference must teach each and every feature of the claims. If one were to read Bodin, one would certainly not walk away with the impression that the handover access message is received at a further base station. If one were to read Bodin, certainly one would not understand that a check is performed at a further base station to see if the message is a handover signaling message. There is simply no mention in Bodin regarding what happens.

It appears that the Examiner has incorrectly assumed what occurs in Bodin. Perhaps the

Examiner believes that the features not mentioned in Bodin are inherent in Bodin. However, the Examiner is reminded that the standard for inherency is very high. The feature must be present in the reference. There can be no question. "To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)

Upon further review, it is hoped that the Examiner will have at least a reasonable doubt as to whether Bodin contains the features previously thought to be there. Applicant not only questions whether the features are present in Bodin, Applicant knows that they are not present.

In view of the foregoing amendments and remarks, withdrawal of the anticipation rejection is requested.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: October 18, 2006

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